

BAY AREA GREENPRINT



What is a greenprint?

Strategic conservation plan and/or tool that reveals the economic and social benefits that parks, open space, and working lands provide communities.



Source: www.greenprintheub.org

Problem

- Conservation is not considered early enough in the planning and project development process.
- Confusing access to data.
- Multi-benefit and landscape-scale planning is uncommon yet desired.



Solution: Bay Area Greenprint

- Supply planners with natural resource data and an assessment framework; one-stop shop.
- Incorporate natural resource and working lands conservation early into land use plans and decisions
- Raise awareness of nature's benefits and encourage adoption



Goal of the Greenprint

Sustainable growth and conservation
informed land use decisions lead to
conserving natural resources and
working lands



Credit: Santa Clara Valley Open Space Authority

BAY AREA GREENPRINT

Who is using the greenprint?

Conservation
Agencies

Infrastructure
Agencies

Consultants

Planners

Developers

LAFCOs



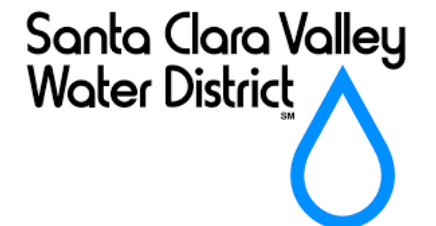
Strategic Advisors Group



Nichols · Berman
Environmental Planning



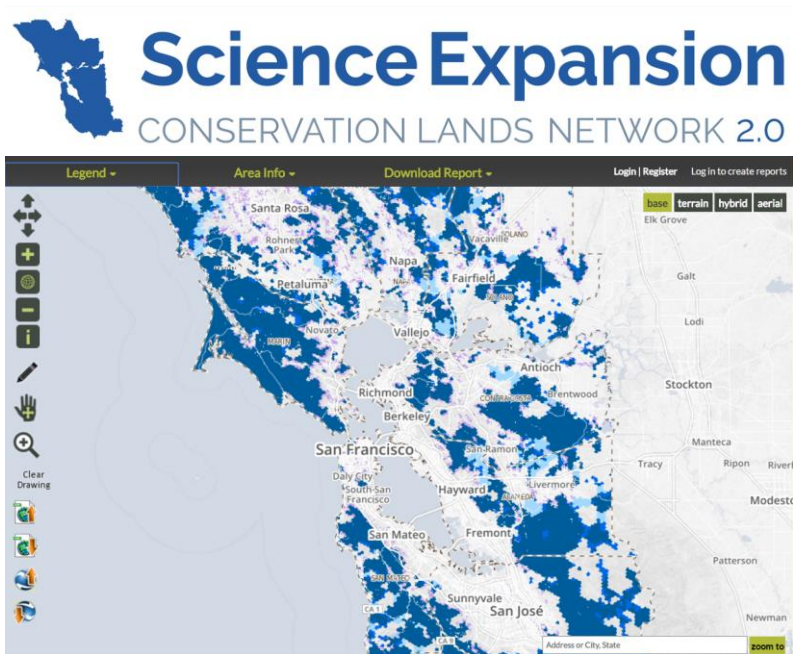
Terrell Watt Planning Consultants



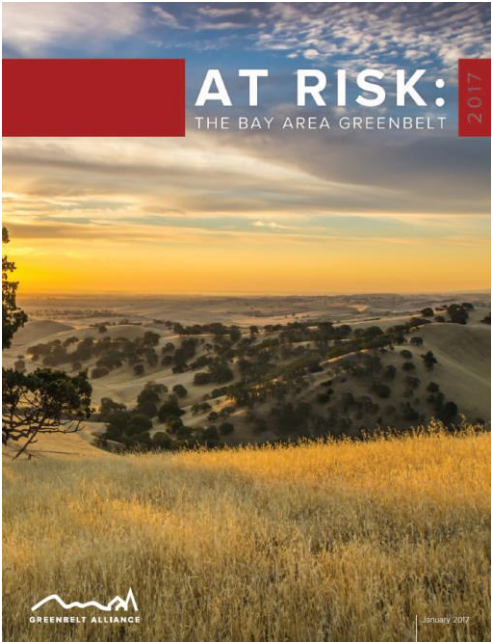
Science & Methods Committee



Data Sources



San Francisco Bay Area Climate-Smart Watershed **Analyst**



Farmland Mapping and Monitoring Program

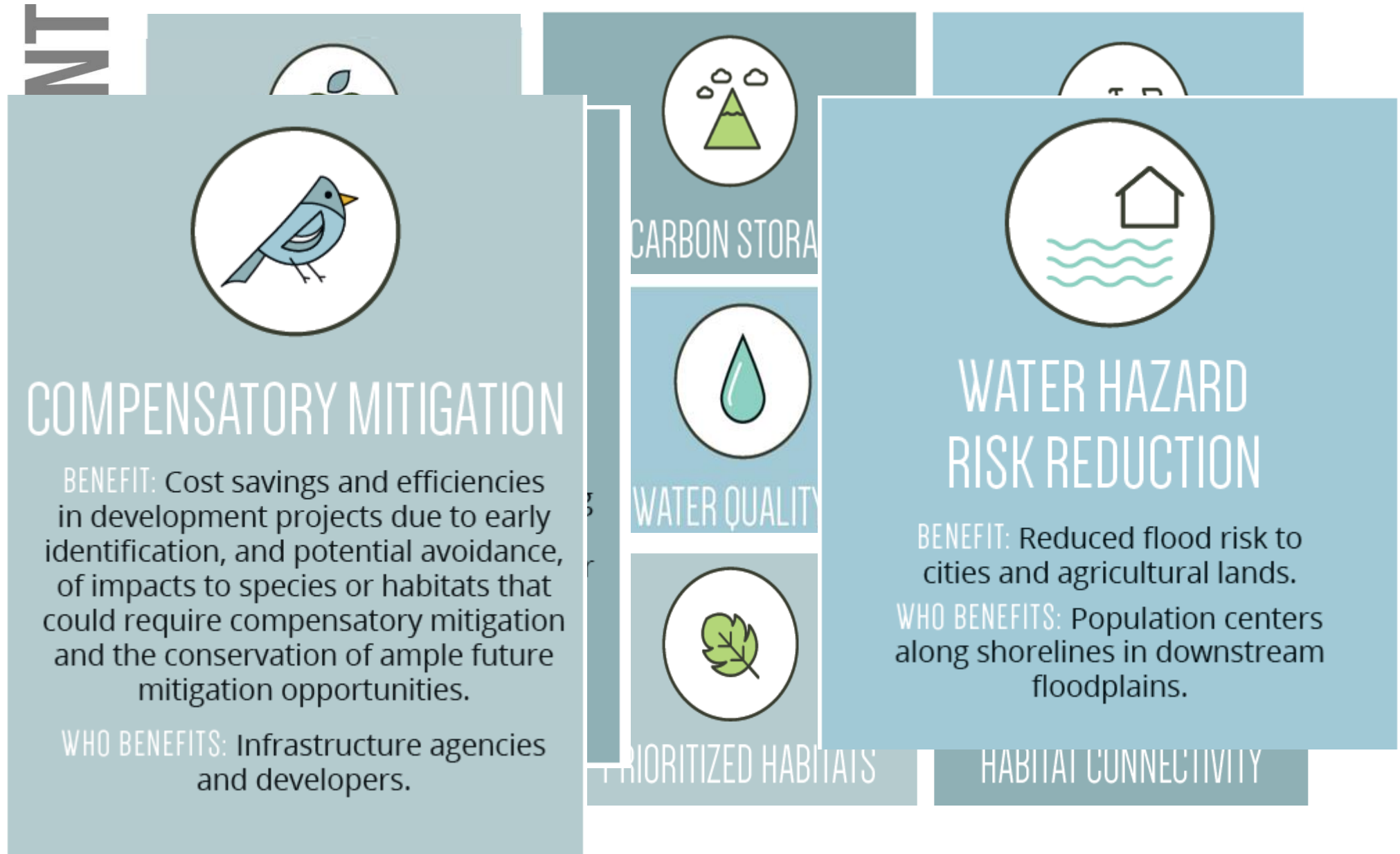
California Environmental Protection Agency
Air Resources Board

California Greenhouse Gas Inventory - Forests and Other Lands



CA LCC *California Landscape Conservation Cooperative*
Climate Commons

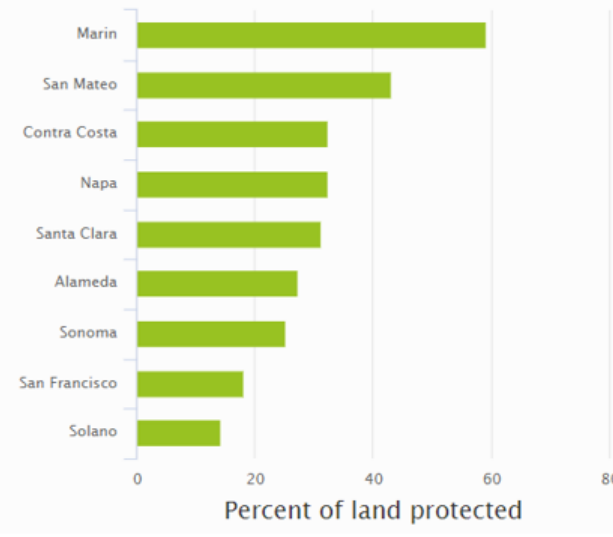
Nature's Nine Values and Benefits



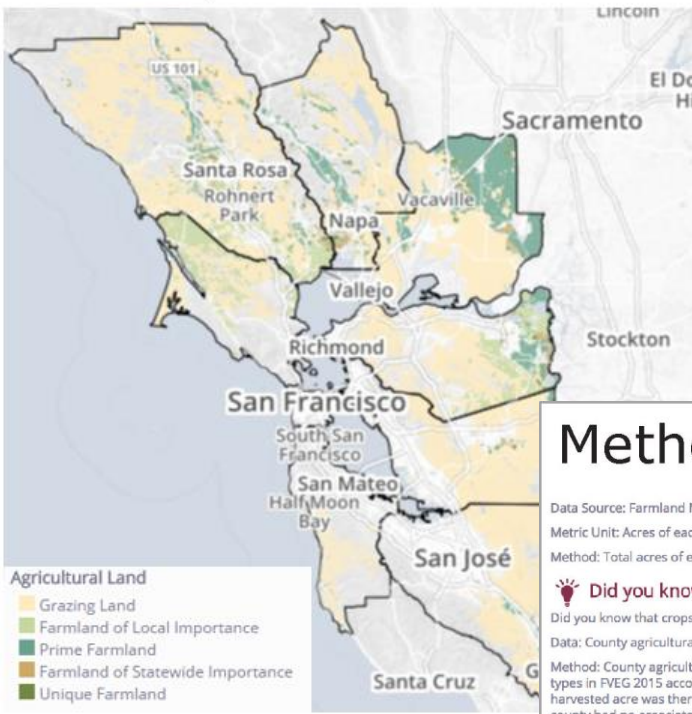
How can I access information in the Greenprint?

Natural Resource Dashboard

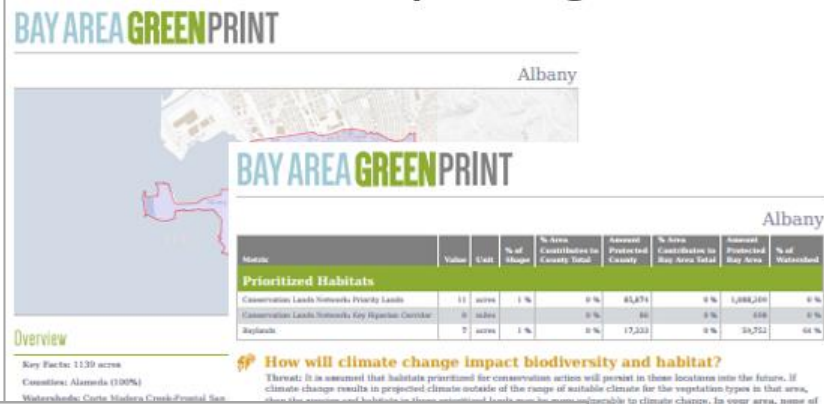
HOW DO BAY AREA COUNTIES STACK UP?



Webmap & Data Download



Multi-benefit Reporting



Methods & Glossary

Data Source: Farmland Mapping and Monitoring Program (FMMP).

Metric Unit: Acres of each FMMP category.

Method: Total acres of each FMMP category were summed for an area of interest.

Did you know?

Did you know that crops in this area are worth as much as \$30X,000?

Data: County agricultural commissioner data cross-walked to and summarized by FVEG 2015 agricultural types.

Method: County agricultural commissioner crop types were cross-walked to the agriculture California Wildlife Habitat Relationship (CWHR) types in FVEG 2015 according to CWHR type descriptions. These cross-walk relationships are listed in this table. The production value per harvested acre was then averaged across crop types associated with each CWHR agricultural type within each county. If a CWHR type in a county had no associated crop production value in the county crop report, a statewide average production value was used for that CWHR type. Value per acre was then converted to total dollar value per 30m grid (equation 1).

$$x \frac{\text{dollars}}{\text{acre}} \times \frac{1 \text{ acre}}{4046.86 \text{ m}^2} \times \frac{900 \text{ m}^2}{\text{gridcell}} = \text{dollar value per 30m grid cell}$$

Equation 1. Conversion of agricultural type value per acre to total production value of each grid cell

Production value was then summed across the area of interest.

How will climate change impact food production?

Threats to food production in a changing climate

A warmer and/or drier climate may require additional irrigation to maintain the same crop in the same location.

Metric: Acre-feet of additional irrigation needed to offset climate change.

Data: Delta Climate Water Deficit (CWD) (USGS 2014) in locations where CWD is expected to increase. CWD quantifies evaporative demand exceeding available soil moisture and is measured in mm/yr. Projected increases in CWD in agricultural areas will indicate the additional water that may be needed at a given location to maintain status quo in terms of agricultural production.

Method: Global Circulation Models (GCM) project future climate conditions based on greenhouse gas concentrations and oceanic

Irrigated cropland in Napa County. Photo by Craig Camp, CC-BY, Flickr.

BAY AREA GREENPRINT



What policies protect nature's values and benefits?

FOOD
PRODUCTION



WATER
QUALITY



BIODIVERSITY &
HABITAT



OUTDOOR
RECREATION



OPEN SPACE





Did you know?

There are observations of **rare or protected species** in your area of interest

The **value of crops** in this area are worth as much as \$55,000

The groundwater recharge potential in this area is equivalent to the annual water use for 36,368 households

Your area is part of a municipal **drinking water supply** watershed

Your area contains **303d listed** streams and waterbodies

There is one **fish passage barrier** in your area

Your area has **higher than average** water quality



How will climate change impact nature's values and benefits?

Threat

How is each resource threatened by climate change?



Opportunity

What opportunities exist to protect these resources given a changing climate?



Test Drive:

BayAreaGreenprint.org

Opportunities

- General Plans
- LAFCo Decisions
- Transportation and Water Planning
- Priority Conservation Area Decisions
- Assessing conservation opportunities
- Assessing development opportunities
- Resource for journalists



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